

## **SOUTH DAKOTA STATEWIDE FISHERIES SURVEY**

**2102-F21-R-47**

**Name:** USFS Pasture # 9 Dam

**County:** Perkins

**Legal description:** Sec. 4 & 9, T 20 N, R 16 E

**Location from nearest town:** 1 mi. west, 15 mi. south, ½ mi. east of Lemmon, SD

**Dates of present survey:** June 23-25, 2014

**Date last surveyed:** July 12-13, 2010

Primary Species:(game and forage)

1. Largemouth bass
2. Yellow perch
3. Rainbow trout

Secondary and other species:

1. Green sunfish
2. \_\_\_\_\_
3. \_\_\_\_\_

### **PHYSICAL CHARACTERISTICS**

**Surface Area:** 19 acres

**Watershed:** Appx. 450 acres

**Maximum depth:** 16+ feet

**Mean depth:** NA feet

**Lake elevation at survey (from known benchmark):** full

#### **Ownership of lake and adjacent lakeshore property:**

The United States Forest Service (USFS) owns the pond and the land surrounding the dam in Pasture #9.

#### **Fishing Access:**

USFS Pasture #9 Dam lies along Highway 73 and is easily accessed by a 1.5 mile gravel road. A large gravel parking lot is located on the northeast side of the lake at the end of the gravel road. Two walking paths from the parking lot lead to three picnic shelters near the water's edge and another path leads south of the picnic shelters to the lake. Angling can be difficult around the rest of the lake due to shallow water and lack of adequate paths. Angling can be done off the dam over the riprap.

#### **Observations of Water Quality and Aquatic Vegetation:**

Rooted aquatic vegetation consists of bulrushes and cattails and was primarily observed only in shallow bay areas during sampling.

#### **Observations on conditions of structures (i.e. spillway, boat ramps, docks, roads etc.)**

No boat ramp exists at the dam in USFS Pasture #9. The condition of the dam grade and any other structures associated with the dam were not inspected by department personnel during the 2014 survey. The USFS has developed a recreation area on the west side of the lake with parking area, picnicking area and outhouse. The access road to the lake has also been improved to a maintained gravel road instead of a two track trail.

## MANAGEMENT OBJECTIVES

- Objective 1.** Provide a largemouth bass fishery as water levels allow.
- Objective 2.** Provide a panfish fishery as water levels allow.
- Objective 3.** Stock rainbow trout and channel catfish for additional angling opportunity as water levels allow.

## BIOLOGICAL DATA

### Sampling Effort and Catch

A fisheries survey was completed on USFS Pasture #9 on June 23-25, 2014. The survey consisted of three trap nets set overnight, sampled, and then reset for a second night for a total of six net nights. A single gill net was set for one night. Angling was utilized to sample the largemouth bass with a total of six angler hours.

USFS Pasture #9 is stocked annually with hatchery rainbow trout. Additional fish species such as largemouth bass, yellow perch, and channel catfish have been stocked by South Dakota Game, Fish and Parks (SDGFP) personnel to add angling opportunity. Green sunfish and walleye were not stocked by SDGFP. A total of six fish species were collected during the survey (Tables 1 and 2).

Table 1. Catch data from all species collected in four trap nets in USFS Pasture #9, Perkins County, June 23-25, 2014. CPUE's with 80% confidence intervals in parentheses. PSD, PSD-P and  $Wr$  with 95% confidence intervals in parentheses.

Species	N	CPUE	CPUE-S	PSD	PSD-P	$Wr \geq S$
Yellow perch	342	68.4 (35.1)	53 (27.2)	1 (1)	1 (1)	90.3 (1.6)
Green sunfish	24	4.8 (2.2)	4.8 (2.2)	58 (22)	0	93.2 (1.2)
Largemouth bass	1	0.2 (0.3)	0.2 (0.3)	0	0	98.1 (--)
Walleye	1	0.2 (0.3)	0.2 (0.3)	100	0	88.7 (--)
Channel catfish	1	0.2 (0.3)	0.2 (0.3)	100	100	109.1 (--)

Table 2. Catch data from all species collected in one gill net in USFS Pasture #9, Perkins County, June 23-25, 2014. CPUE's with 80% confidence intervals in parentheses. PSD, PSD-P and  $Wr$  with 95% confidence intervals in parentheses.

Species	N	CPUE	CPUE-S	PSD	PSD-P	$Wr \geq S$
Yellow perch	35	35 (--)	35 (--)	0	0	90.6 (0.4)
Rainbow trout	2	2 (--)	2 (--)	0	0	80.4 (57.4)

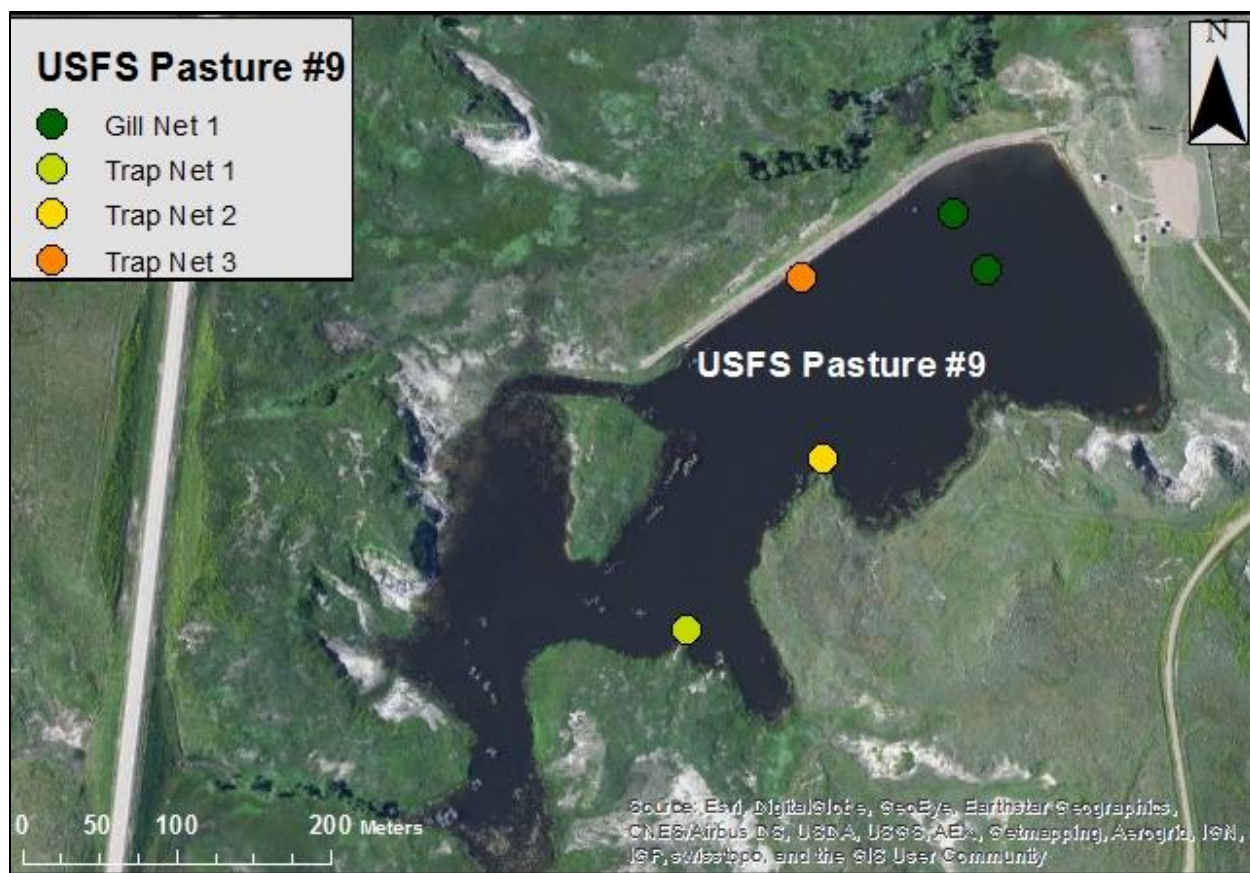


Figure 1. Locations of experimental gill nets and trap nets during a fishery survey of USFS Pasture #9, Perkins County, South Dakota, 2014.

### Green sunfish

Green sunfish were the second most abundant fish species collected during the survey. However, it appeared that there may be more green sunfish in the pond than were represented in the sample as they were seen in large numbers throughout the pond. A total of 24 green sunfish were collected in the trap nets with a CPUE-S of close to 5. The green sunfish collected range from an inch below to an inch above quality length (six inches) (Figure 2). The PSD and PSD-P were 58 and 0, respectively. These fish were in good condition with a  $W/S$  of 93.

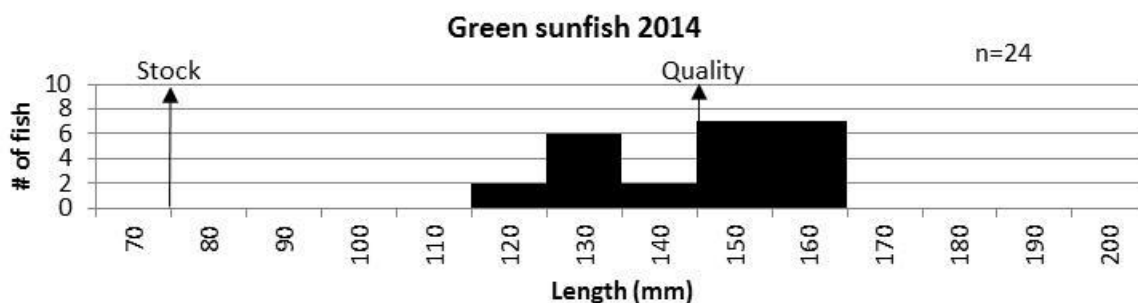


Figure 2. Length frequency histogram of green sunfish from trap nets at USFS #9 on June 23-25, 2014.

## Rainbow trout

Rainbow trout have been stocked into USFS Pasture #9 annually for the past five years. Only two rainbow trout were collected during this survey, and they were both found in the gill net. However, rainbow trout were seen surfacing throughout the pond and there may be more in the pond than what was represented in the sample. The two rainbow trout collected were 360 and 332 millimeters in length (approximately 14 and 13 inches). The  $W_{\geq S}$  for the rainbow trout was 80.

## Yellow perch

Yellow perch were the most abundant fish species collected during the survey with 342 in the trap net and 35 in the gill net. The CPUE was 68 and the CPUE-S was 53 in the trap nets. There is a large year class of yellow perch at or just over stock length (Figures 3 and 4). There were very few yellow perch collected over quality length (eight inches) with a PSD of 1. The  $W_{\geq S}$  for yellow perch collected in the trap and gill nets was good at 90.

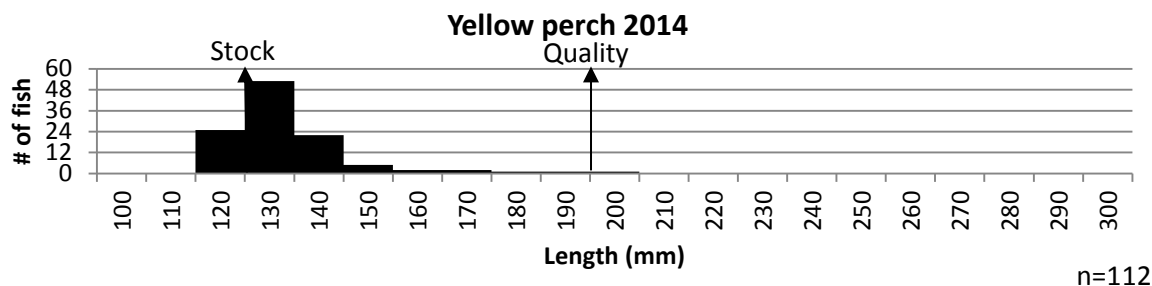


Figure 3. Length frequency histogram of yellow perch from trap nets at USFS #9 on June 23-25, 2014.

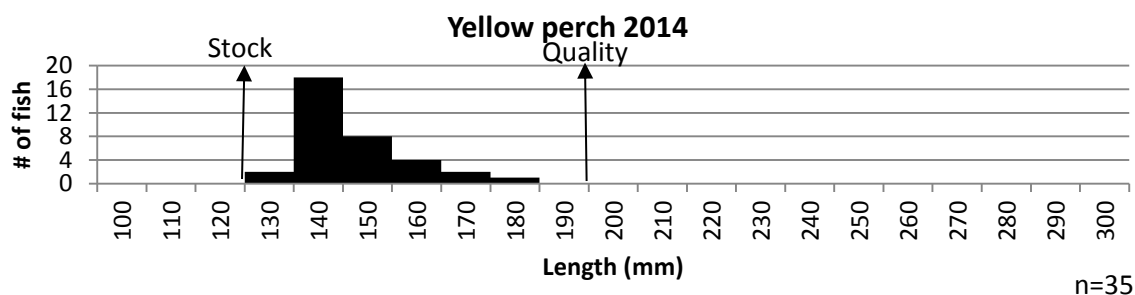


Figure 4. Length frequency histogram of yellow perch from gill nets at USFS #9 on June 23-25, 2014.

## RECOMMENDATIONS

1. Continue to stock adult largemouth bass when available to maintain a predator base as long as fish surveys continue to indicate high panfish densities.
2. Resurvey every five years, including largemouth bass sampling.
3. Continue to stock hatchery rainbow trout and possibly channel catfish to provide additional fishing opportunity.

## APPENDIX

Appendix A. Stocking record for USFS Pasture #9, Perkins County, 2004-2014.

Year	Number	Species	Size
2004	860	Largemouth bass	Fingerling
2005	2,040	Largemouth bass	Fingerling
2006	145 4,500	Channel catfish Largemouth bass	Adult Fingerling
2009	650 1,200	Yellow perch Rainbow trout	Adult Catchable
2010	1,200	Rainbow trout	Catchable
2011	1,200	Rainbow trout	Catchable
2012	1,970 230	Rainbow trout Largemouth bass	Catchable Adult
2013	1,600	Rainbow trout	Catchable
2014	1,400 200 100	Rainbow trout Largemouth bass Largemouth bass	Catchable Juvenile Adult